

2nd International Conference on

Food Safety and Regulatory Measures

June 06-08, 2016 London, UK

Antibiotic activity of the essential oil of *Rosmarinus officinalis* L. against seven bacterial strains

Nora Mahfouf¹, Salima Bennadja² and AbdelGhani Djahoudi²¹University of El Taref, Algeria²University of Annaba, Algeria

Rosemary (*Rosmarinus officinalis* L.) is a typical Mediterranean plant which occupies an important place in the pharmacopeias of the countries of the Mediterranean coastline. The purpose of this work is to evaluate the antibiotic activity of the essential oil of rosemary (pure and diluted at 1/2, 1/4, 1/8, 1/16 and 1/32) against 7 bacterial strains. It is about *Klebsiella pneumoniae* not productive of carbapenemase (Kpc-), *Klebsiella pneumoniae* productive of carbapenemase (Kpc+), *Acinetobacter* S141, *Escherichia coli* S42, *Serratia* S103, *Pseudomonas aeruginosa* S72 and *Staphylococcus aureus* 178. The analysis of the essential oil of rosemary by GC/MS revealed the existence of 25 components and borneol (29.54%), verbenone (12.41%), beta linalool (11.14%) and camphor (10.45%) which are the major components. We also note the presence of α pinène (3.79%). The antibacterial effect of this oil proved to be very efficient against Kpc+, *Acinetobacter* S141 and *Escherichia coli* S42 which gave diameters of inhibition with pure oil and even with much diluted oil. *Serratia* S103 and with a lesser degree Kpc presents an activity relatively moderate with the pure oil but remain interesting sensitivity, even with very diluted oil. *Pseudomonas aeruginosa* S72 presents a medium sensitivity towards diluted oil but it is resistant to the pure one, contrary to *Staphylococcus aureus* which is sensitive only to pure oil and to dilution 1/2.

Biography

Nora Mahfouf has completed her studies in Chemistry from University of El Taref, Algeria she is a PhD student at the Laboratory of Chemistry, Department of Food Science & Human Nutrition, School of Food.

noramahfouf@yahoo.fr

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